IN THE CLAIMS:

The following is a complete list of the claims. This listing replaces all earlier versions and listings of the claims.

Claims 1-3 (canceled)

Claim 4 (previously presented): A light-scanning optical apparatus according to claim 17, wherein the requirement of conditional formula (3) is satisfied:

$$0.86 < N1 / N2 < 0.92 \quad (3).$$

Claim 5 (previously presented): A light-scanning optical apparatus according to claim 17,

wherein the requirement of conditional formula (4) is satisfied:

$$0.05 < D0 / F < 0.08 \text{ , and} \quad (4),$$

wherein D0 is the distance between the deflection plane of the optical deflector and the spherical lens.

Claim 6 (previously presented): A light-scanning optical apparatus according to claim 17,

wherein the requirement of conditional formula (5) is satisfied:

$$0.15 < \frac{(D1 / N1 + D2 + D3 / N2)}{F} < 0.20 \text{ , and} \quad (5),$$

wherein Dl is the thickness of the spherical lens, D2 is the distance between the spherical lens and the first cylindrical lens, and D3 is the thickness of the first cylindrical lens.

Claims 7-9 (canceled)

Claim 10 (previously presented): A light-scanning optical apparatus according to claim 17, wherein:

said focusing optical system showing power in the sub-scanning direction has a second cylindrical lens; and

the light beam is made to pass through a position off the optical axis of the second cylindrical lens in the sub-scanning section when the image height is equal to zero (0).

Claim 11 (previously presented): A light-scanning optical apparatus according to claim 10, wherein a direction vector of the light beam reflected by the deflection plane at image height = 0 and the optical axis of the second cylindrical lens are made to show a predetermined angle.

Claim 12 (original): A light-scanning optical apparatus according to claim 10, wherein the perpendicular to the deflection plane at image height = 0, the optical axis of the spherical lens and that of the first cylindrical lens are parallel with each other in the sub-scanning section.

Claim 13 (previously presented): A light-scanning optical apparatus according to claim 10, wherein:

the perpendicular to the deflection plane at image height=0 and the optical axis of the first cylindrical lens are parallel with each other in the sub-scanning section; and

if a direction vector of the light beam entering the deflection plane at image height = 0 and a direction vector of the light beam reflected by the deflection plane are expressed respectively by $\alpha$l and $\alpha$2 and a direction vector of the optical axis of the spherical lens is expressed by $\beta$, the requirement of the following conditional formula is satisfied,

$$|\alpha 1 \cdot \beta| > |\alpha 2 \cdot \beta|.$$

Claim 14 (original): A light-scanning optical apparatus according to claim 10, wherein the light beam reflected by the deflection plane at image height = 0, the optical axis of the spherical lens and that of the first cylindrical lens are parallel with each other in the sub-scanning section.

Claim 15 (original): A light-scanning optical apparatus according to claim 10, wherein the light beam emitted from the light source strikes the deflection plane of the optical deflector with a width broader than that of the deflection plane in the main-scanning direction.

Claim 16 (original): A light-scanning optical apparatus according to claim 10, wherein the light beam emitted from the light source strikes the deflection plane of the optical deflector substantially along the center line of the deflection angle of the optical deflector.

Claim 17 (currently amended): A light-scanning optical apparatus comprising:

an optical deflector;

an incidence optical system adapted to cause a light beam emitted from a light source to strike a deflection plane of said optical deflector with a predetermined angle in a sub-scanning section; and

a focusing optical system for focusing the light beam reflected by the deflection plane of the optical deflector on a surface to be scanned,

wherein said focusing optical system includes an ~~fθ lens~~ first optical system having a spherical lens and a first cylindrical lens showing power in the main-scanning direction and [[an]] a second optical system showing power in the sub-scanning direction,

wherein said focusing optical system satisfies the requirements of conditional formulas (1) and (2)

$$\left|\frac{(N1-1)}{R2}\cdot F\right| < 0.15 \qquad (1)$$

and

$$\left|\frac{(N2-1)}{R3}\cdot F\right| < 0.15 \text{ ; and} \qquad (2)$$

wherein F is the focal length of the ~~fθ lens~~ first optical system in the main-scanning direction, R2 is the radius of curvature of the surface of the spherical lens facing the surface to be scanned, R3 is the radius of curvature of the surface of the first cylindrical lens facing the optical deflector as viewed in the main-scanning direction, N1 is the refractive index of the material of the spherical lens at the operating wavelength, and N2 is the refractive index of the material of the first cylindrical lens at the operating wavelength.

Claim 18 (original): A light-scanning optical apparatus according to claim 17, wherein the left side of the conditional formula (1) and the left side of the conditional formula (2) satisfy the requirement

$$\left|\frac{(N1-1)}{R2}\cdot F\right| < \left|\frac{(N2-1)}{R3}\cdot F\right|.$$

Claim 19 (original): A light-scanning optical apparatus according to claim 17, wherein the light beam emitted from the light source strikes the deflection plane of the optical deflector with a width broader than that of the deflection plane in the main-scanning direction.

Claim 20 previously presented): A light-scanning optical apparatus according to claim 17, wherein the spherical lens and the first cylindrical lens also constitute part of said incidence optical system.

Claim 21 (original): A light-scanning optical apparatus according to claim 17, wherein the light beam emitted from the light source strikes the deflection plane of the optical deflector substantially along the center line of the deflection angle of the optical deflector.

Claim 22 (previously presented): A light-scanning optical apparatus according to claim 17, wherein said focusing optical system showing power in the sub-scanning direction has a second cylindrical lens showing power in the sub-scanning direction.

Claims 23-28 (canceled)

Claim 29 (currently amended): ~~A light-scanning~~ An image forming apparatus according to claim [[17]] 63, further comprising:

a photosensitive member defining at least in part the surface to be scanned whereby the light beam focused on said photosensitive member by said focusing optical system creates an electrostatic latent image;

a developing unit for developing the electrostatic latent image formed on said photosensitive member into a toner image;

a transfer unit for transferring the developed toner image onto a toner image receiving member; and

a fixing unit for fixing the transferred toner image on the toner image receiving member.

Claim 30 (currently amended): ~~A light-scanning~~ An image forming apparatus according to claim [[17]] 63, further comprising a printer controller for transforming code data input from an external device into an image signal and inputting the image signal into said light-scanning optical apparatus.

Claims 31-46 (canceled)

Claim 47 (currently amended): A light-scanning optical apparatus comprising:

[[a]] an optical deflector;

an incidence optical system adapted to cause a light beam emitted from a light source to strike a deflection plane of the optical deflector with a predetermined angle in a sub-scanning section; and

a focusing optical system for focusing the light beam reflected by the deflection plane of the optical deflector on a surface to be scanned,

wherein said focusing optical system includes an ~~fθ lens~~ first optical system having a first lens showing power in the main scanning direction and a second lens

showing power in the main scanning direction and [[an]] a second optical system showing power in the sub-scanning direction[[;]],

wherein said focusing optical system satisfies the requirements of conditional formulas

$$\left|\frac{(N1-1)}{R2}\cdot F\right| < 0.15,$$

[[and]]

$$\left|\frac{(N2-1)}{R3}\cdot F\right| < 0.15, \text{ [[and]]}$$

$$\left|\frac{(N2-1)}{R3}\cdot F\right| < \left|\frac{N1-1}{R2}\cdot F\right|, \text{ and}$$

wherein F is the focal length of the ~~fθ lens~~ first optical system in the main-scanning direction, R2 is the radius of curvature in the main scanning direction of the surface of the first lens facing the surface to be scanned, R3 is the radius of curvature of the surface in the main scanning direction of the surface of the second lens facing said optical deflector as viewed in the main-scanning direction, N1 is the refractive index of the material of the first lens at the operating wavelength, and N2 is the refractive index of the material of the second lens at the operating wavelength.

Claim 48 (canceled)

Claim 49 (previously presented): A light-scanning optical apparatus according to claim 47, wherein the light beam emitted from the light source strikes the deflection plane of the optical deflector with a width broader than that of the deflection plane in the main-scanning direction.

Claim 50 (previously presented): A light-scanning optical apparatus according to claim 47, wherein the first lens and the second lens also constitute part of said incidence optical system.

Claim 51 (previously presented): A light-scanning optical apparatus according to claim 47, wherein the light beam emitted from the light source strikes the deflection plane of the optical deflector substantially along the center line of the deflection angle of the optical deflector.

Claim 52 (currently amended): A light-scanning optical apparatus according to claim 47, wherein said ~~focusing~~ second optical system showing power in the sub-scanning direction has a cylindrical lens showing power in the sub-scanning direction.

Claim 53 (previously presented): A light-scanning optical apparatus according to claim 47, wherein said apparatus satisfies the requirement of conditional formula

$$0.86<N1/N2<0.92 .$$

Claim 54 (previously presented): A light-scanning optical apparatus according to claim 47,

wherein said apparatus satisfies the requirement of conditional formula

$$0.05 < D0 / F < 0.08, \text{ and}$$

wherein D0 is the distance between the deflection plane of the optical deflector and the first lens.

Claim 55 (previously presented): A light-scanning optical apparatus according to claim 47,

wherein the first lens comprises a spherical lens and the second lens comprises a cylindrical lens; and

wherein the requirement of the following conditional formula is satisfied

$$0.15 < \frac{(D1 / N1 + D2 + D3 / N2)}{F} < 0.20 \text{ , and}$$

wherein Dl is the thickness of the spherical lens, D2 is the distance between the spherical lens and the cylindrical lens, and D3 is the thickness of the cylindrical lens.

Claim 56 (previously presented): A light-scanning optical apparatus according to claim 47, wherein:

said focusing optical system showing power in the sub-scanning direction has a cylindrical lens; and

the light beam at image height = 0 is made to pass through a position off the optical axis of the cylindrical lens in the sub-scanning section.

Claim 57 (previously presented): A light-scanning optical apparatus according to claim 56, wherein a direction vector of the light beam reflected by the deflection plane at image height=0 and the optical axis of the cylindrical lens are made to show a predetermined angle.

Claim 58 (previously presented): A light-scanning optical apparatus according to claim 56, wherein the perpendicular to the deflection plane at image height = 0, the optical axis of the first lens and that of the second lens are parallel with each other in the sub-scanning section.

Claim 59 (previously presented): A light-scanning optical apparatus according to claim 56, wherein:

the perpendicular to the deflection plane at image height=0 and the optical axis of the second lens are parallel with each other in the sub-scanning section; and

if a direction vector of the light beam entering the deflection plane at image height=0 and a direction vector of the light beam reflected by the deflection plane are expressed respectively by $\alpha 1$ and $\alpha 2$ and a direction vector of the optical axis of the first lens is expressed by $\beta$, requirement of the following conditional formula is satisfied

$$|\alpha 1 \cdot \beta| > |\alpha 2 \cdot \beta|.$$

Claim 60 (previously presented): A light-scanning optical apparatus according to claim 56, wherein the light beam reflected by the deflection plane at image height = 0, the optical axis of the first lens and that of the second lens are parallel with each other in the sub-scanning section.

Claim 61 (currently amended): ~~A light-scanning optical~~ An image forming apparatus according to claim [[47]] 64, further comprising:

a photosensitive member arranged on the surface to be scanned;

a developing unit for developing an electrostatic latent image formed on said photosensitive member by a light beam focused on said photosensitive member by said focusing optical system into a toner image;

a transfer unit for transferring the developed toner image onto a toner image receiving member; and

a fixing unit for fixing the transferred toner image on the toner image receiving member.

Claim 62 (currently amended): ~~A light-scanning optical~~ An image forming apparatus according to claim [[47]] 64, further comprising a printer controller for transforming code data input from an external device into an image signal and inputting the image signal into said light-scanning optical apparatus.

Claim 63 (new): An image forming apparatus comprising:

an optical deflector;

an incidence optical system adapted to cause a light beam emitted from a light source to strike a deflection plane of said optical deflector with a predetermined angle in a sub-scanning section; and

a focusing optical system for focusing the light beam reflected by the deflection plane of the optical deflector on a surface to be scanned,

wherein said focusing optical system includes an first optical system having a spherical lens and a first cylindrical lens showing power in the main-scanning direction and a second optical system showing power in the sub-scanning direction,

wherein said focusing optical system satisfies the requirements of conditional formulas (1) and (2)

$$\left|\frac{(N1-1)}{R2}\cdot F\right| < 0.15 \qquad (1)$$

and

$$\left|\frac{(N2-1)}{R3}\cdot F\right| < 0.15\text{, and} \qquad (2)$$

wherein F is the focal length of the first optical system in the main-scanning direction, R2 is the radius of curvature of the surface of the spherical lens facing the surface to be scanned, R3 is the radius of curvature of the surface of the first cylindrical lens facing the optical deflector as viewed in the main-scanning direction, N1 is the

refractive index of the material of the spherical lens at the operating wavelength, and N2 is the refractive index of the material of the first cylindrical lens at the operating wavelength.

Claim 64 (new): An image forming apparatus comprising:

an optical deflector;

an incidence optical system adapted to cause a light beam emitted from a light source to strike a deflection plane of the optical deflector with a predetermined angle in a sub-scanning section; and

a focusing optical system for focusing the light beam reflected by the deflection plane of the optical deflector on a surface to be scanned,

wherein said focusing optical system includes an first optical system having a first lens showing power in the main scanning direction and a second lens showing power in the main scanning direction and a second optical system showing power in the sub-scanning direction;

wherein said focusing optical system satisfies the requirements of conditional formulas

$$\left|\frac{(N1-1)}{R2}\cdot F\right| < 0.15,$$

$$\left|\frac{(N2-1)}{R3}\cdot F\right| < 0.15,$$

$$\left|\frac{(N2-1)}{R3}\cdot F\right| < \left|\frac{N1-1}{R2}\cdot F\right|, \text{ and}$$

wherein F is the focal length of the first optical system in the main-scanning direction, R2 is the radius of curvature in the main scanning direction of the surface of the first lens facing the surface to be scanned, R3 is the radius of curvature of the surface in the main scanning direction of the surface of the second lens facing said optical deflector as viewed in the main-scanning direction, N1 is the refractive index of the material of the first lens at the operating wavelength, and N2 is the refractive index of the material of the second lens at the operating wavelength.